

APS EXPERIMENT SAFETY APPROVAL FORM

Completed by Experimenter

NOTE: This form is to be submitted to the CAT. No experiment will be allowed to run until a properly completed and approved experiment safety approval form has been posted by an APS Floor Coordinator. **Approval is valid for a maximum of six months from the CAT approval date.**

Exp. Subject: _____
(See choices on second page)

Funding Source: _____
(See choices on second page)

☐ Classified work will be performed

1. Beamline Station (Sector - BM or ID - station, e.g., 17-ID-B): _____

Date submitted: _____

2. Experiment title:

3a. Experiment spokesperson and alternates: (Name, Institution, E-mail, and Telephone)

3b. List all other experimenters (names and institutions) working at the APS (attach second sheet if needed):

4. Materials List samples & chemicals to be used. Check appropriate boxes regarding known hazards: (definitions on back.)

Name of material	Quantity	CAS # (if known)	Known Hazards					Dispose at ANL ²
			toxic	biohazard	flammable	Radioactive	other ¹	
1								
2								
3								
4								

Notes: 1 Describe other known hazards in User comment section.

2 Check if you plan to dispose of the material at ANL, as either waste or effluent, at the end of the experiment.

☐ additional materials continued on attachment

This experiment will use: ☐ human tissue, ☐ live animals

5. Equipment to be used in the experiment that is not a permanent part of the beamline:

☐ cryogenics ☐ furnace ☐ high pressure ☐ laser ☐ high voltage ☐ non-UL listed electrical ☐ other

6. User comments (include special hazards/controls, describe effluents, previous Safety Approval Form Serial Number, etc.;

☐ additional sheets attached):

Completed by CAT

☐ Additional sheets attached to detail hazard controls/special procedures.

7. CAT comments: _____

8. Safety Approval Form Serial Number: (e.g., 1-IDA-97-01) _____ - _____ - _____
beamline station year sequence

9. Plans are adequate to mitigate hazards and activities are within the beamline operation safety envelope:

CAT approval: _____
name (print) signature date

Person authorized to verify experiment safeguards: _____
name (print)

Experiment Safeguards Verification

All required controls, training & safeguards are in place to start the experiment (Authorization signature):

name (print) signature date

Subject area of this experiment, per DOE classification scheme (list the number of all categories that apply in the space provided on the form): [note: only the Experiment Safety Approval Form has to be forwarded to XFD and/or posted on the beamline by the Floor Coordinator.]

- 1 Materials sciences (includes condensed-matter physics and materials chemistry)
 - 2 Physics (excludes condensed-matter physics)
 - 3 Chemistry (excludes materials chemistry)
 - 4 Polymers
 - 5 Medical applications
 - 6 Biological and life sciences (excludes medical applications)
 - 7 Earth sciences
 - 8 Environmental sciences
 - 9 Optics
 - 10 Engineering
 - 11 Instrumentation or technique development related to user facilities
 - 12 Purchase of specialty service(s) or materials
 - 13 Other: (please specify on front of form)
-

Source of support for the experiment. Please list all that apply in the space provided at the top of the Experiment Safety Approval Form.

- | | |
|---|------------------------------------|
| 1. DOE, Office of Basic Energy Sciences | 7. NASA |
| 2. DOE, Office of Biological & Environmental Research | 8. USDA |
| 3. DOE, Other (specify) | 9. Other U.S. Government (specify) |
| 4. DOD, (specify) | 10. Industry |
| 5. NSF | 11. Foreign (specify) |
| 6. NIH | 12. Other (specify) |
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Hazard Class Definitions:

Hazard: Any existing or possible condition that, by itself or through interaction with other conditions, has the capacity to cause death, injury, illness, property damage, unacceptable environmental impact, or other losses.

Risk: A quantitative measure (or estimate) of the product of the probability that a hazard will result in ill-effect and the consequence of an ill-effect.

Toxic: Having the capacity to cause death, illness, or diminished function. A material that meets one or more of the following criteria should be considered toxic:

- Has a published LD₅₀ (Lethal Dose 50%) equal to or less than 0.5 g/kg of body weight.
- Has a published LC₅₀ (Lethal Concentration 50%) equal to or less than 1000 ppm.
- Has an OSHA permissible exposure limit (PEL) or ACGIH Threshold Limit Value (TLV) equal to or less than 5000 ppm.
- Has an OSHA PEL or ACGIH TLV equal to or less than 10 mg/m³.

Biohazard: An agent of biological origin (e.g., all infectious organisms, their toxins, allergens of biological origin, and genetic fragments) that has the capacity to cause ill-effects in humans.

Flammable: Susceptible to ignition during storage, normal handling, or use. The term includes, but is not necessarily limited to:

- All materials that ignite spontaneously when exposed to air.
- All gases easily ignited in atmospheres containing approximately 21% oxygen.
- All liquids having a flashpoint below 100°F (38°C).
- All combustible solids and liquids having a physical form that makes them easily ignitable if dispersed into ambient atmospheres.

Radioactive: Any material having a specific activity ≥ 2 nCi/g. APS must be notified of any shipment of radioactive materials to/from the site.

Other: Can include oxidizers, corrosives, carcinogens, explosives, and any other hazard not listed.